



UV Systems

Installation and Operating Instructions

Models UVS-110, UV-110, UV-120, UVBB-120

Model	Part # (120v/60Hz)	Part # (220v/50Hz)
UVS-110	163003	163004
UV-110	163005	163006
UV-120	163007	163008
UVBB-120	163009	163010

APPLICATION

Ultraviolet Water Disinfection

SPECIFICATIONS

Models	UVS-110	UV-110	UV-120	UVBB-120
Maximum Operating Pressure	65 psi (4.5 bar)	65 psi (4.5 bar)	65 psi (4.5 bar)	65 psi (4.5 bar)
Temperature Range	40-100° F (4.4-37.8° C)	40-100° F (4.4-37.8° C)	40-100° F (4.4-37.8° C)	40-100° F (4.4-37.8° C)
Flow Rate @ 60 psi (4.1 bar)	1 gpm (3.8 Lpm)	2 gpm (7.6 Lpm)	8 gpm (30 Lpm)	15 gpm (56 Lpm)
Voltage (Domestic)	120v/60Hz	120v/60Hz	120v/60Hz	120v/60Hz
Voltage (International)	220v/50Hz	220v/50Hz	220v/50Hz	220v/50Hz

CBU Cartridge

The UVS-110 and the UV-110 are supplied with a carbon block filter cartridge which reduces sediment, bad taste and odor.

GENERAL PRECAUTIONS

WARNING: Always disconnect the UV from the power source. Follow the procedures provided in this manual. Improper handling can result in death or serious injury.

WARNING: Do not look directly at the UV lamp. This can cause retina/eye damage.

WARNING: Do not touch the UV bulb. Any fingerprints or dirt will reduce the efficiency of the bulb and may cause it to explode.

WARNING: Observe caution when inserting quartz sleeve to prevent breakage and cracking, which may result in injury and damage to unit.

NOTE: When handling the UV bulb hold only the plastic-covered ends of the bulb. If the bulb has been touched, remove bulb and clean with alcohol before reinserting

CAUTION: If water pressure exceeds 65 psi, a pressure regulator, set at less than 65 psi, must be installed before the Ultraviolet system.

CAUTION: Install on cold water lines only.

CAUTION: Do not install where system is exposed to direct sunlight.

CAUTION: Do not use wicking or sealing agents for fitting connections. Teflon® tape is recommended.

CAUTION: This system must be protected from freezing which can cause cracking of the filter housing and water leakage.

CAUTION: Because of the product's limited service life, and to prevent costly repairs or possible water damage, we strongly recommend that the bottom of all opaque housings be replaced every ten years. If the bottom of your housing has been in use for more than this period, it should be replaced immediately. Date the bottom of any new or replacement housing to indicate the next recommended replacement date.

NOTE: Filter cartridge life varies depending on filter type, usage and water conditions.

For the UVS-110 and UV-110

Allow a minimum of 12 inches clearance under the filter for changing the cartridge, and above the system to allow the UV bulb to be changed.

For the UV-120 and UVBB-120

Allow a minimum of 20 inches clearance under the filter for changing the cartridge, and above the system to allow the UV bulb to be changed.

ASSEMBLY INSTRUCTIONS

See exploded assembly drawings on pages 2 and 3.

CARTRIDGE REPLACEMENT (for UVS-110 and UV-110 only)

Your cartridge should be replaced when there is a noticeable drop in water flow at the faucet or tap, and/or when unpleasant odors return (approximately every 6-9 months).

1. Turn off water supply to the system.
2. Open faucet to relieve water pressure to the housing.
3. Unscrew housing from cap. If housing sticks or is difficult to open use an Pentek spanner wrench.
4. Remove used cartridge from housing, remove Teflon® sleeve and discard cartridge.
5. Remove O-ring from groove below the threads of the housing and wipe groove and O-ring clean. Lubricate O-ring with silicone grease. Place O-ring back into the groove. With two fingers wipe or press O-ring down into the groove. **NOTE:** This step is important to ensure a proper filter seal. Make sure that the O-ring is seated level in the groove.
6. Insert a new cartridge into the sump making sure that it slips down over the sump standpipe.
7. Remove gasket from cartridge end and slide Teflon® sleeve into center of cartridge then replace gasket on top of cartridge.
8. Screw the sump onto the cap and hand-tighten. **Do not over-tighten.** Make sure that the cap slips over the cap standpipe.
9. Turn on the water supply to allow the unit to slowly fill with water.
10. Check for leaks before leaving installation.

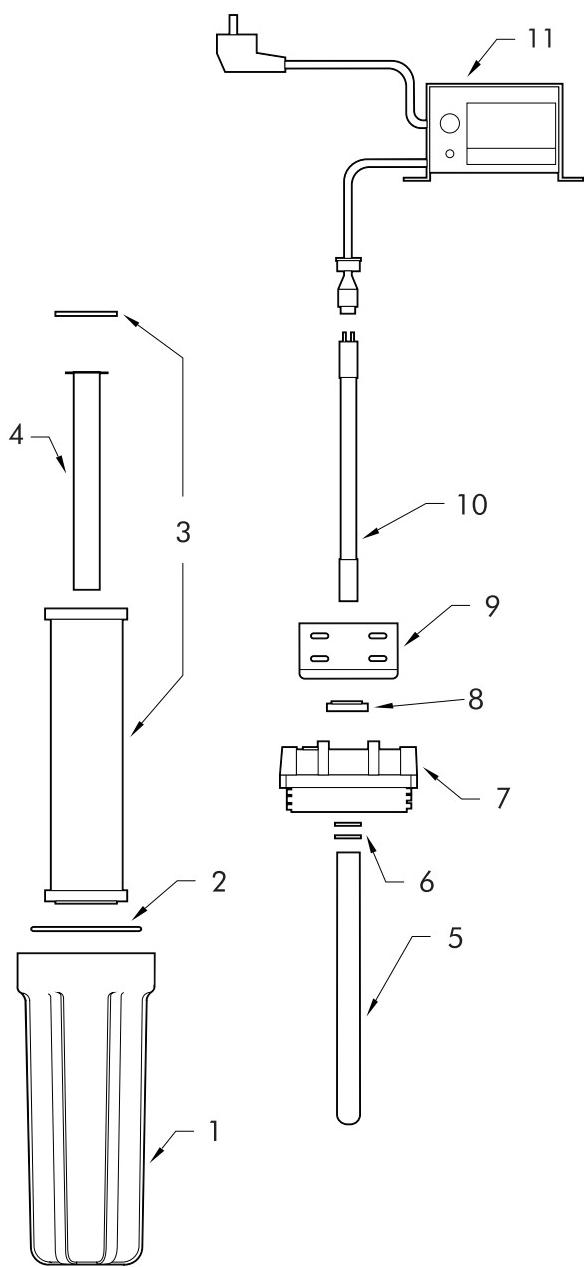
Each time that you use water from your unit for drinking or cooking purposes, it is recommended that you run (flush) the tap for at least 10 seconds prior to using water. This is particularly important if the water tap is not used daily.

UV LAMP REPLACEMENT

1. Turn off all electrical power to the system by unplugging or throwing the circuit.
2. Unscrew the UV control module from the mounting bracket (4 screws) for Models UV-110, UV-120 and UVBB-120.
For Model UVS-100, slide mounting bracket retainer to allow access to the UV bulb.
3. Slide the old bulb out and unplug from the control module.
NOTE: Hold the UV lamp only by the plastic covered ends of the bulb.
4. Carefully discard the old UV lamp.
5. Holding the new UV lamp only by the plastic covered ends of the bulb, plug the new UV lamp into the control module or power cord. Slide the new bulb into the cartridge housing and reattach UV control module or secure mounting bracket retainer (depending on model).
6. Restore electrical power to unit.
7. Check for leaks.

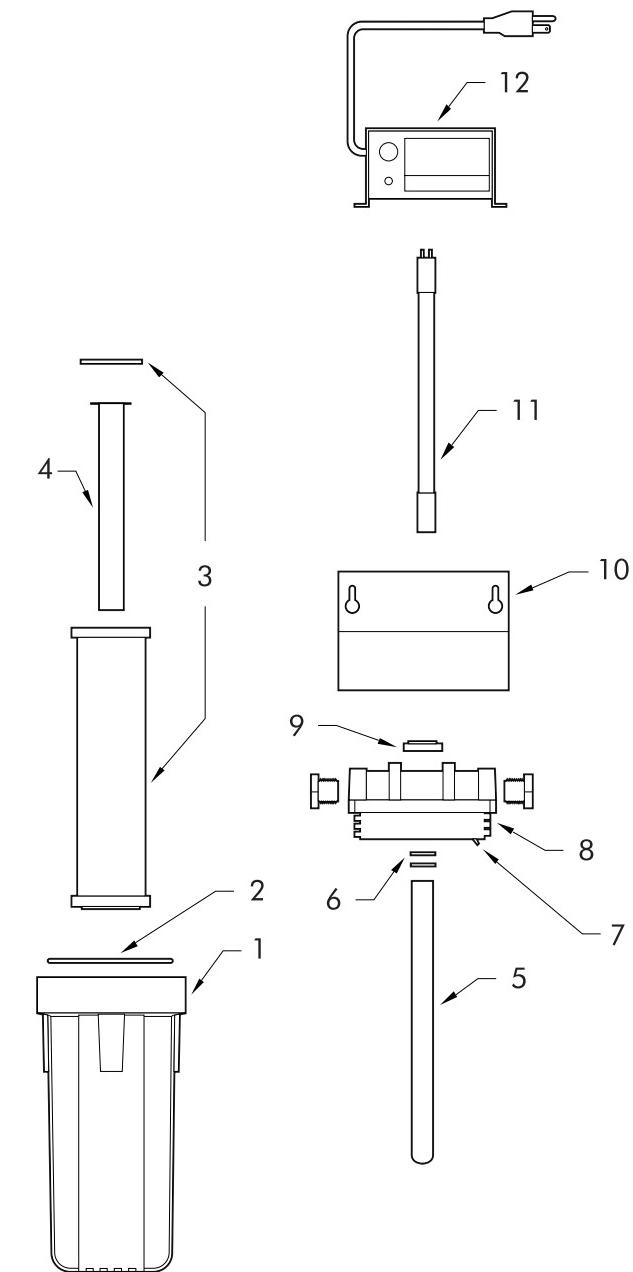
UVS-110 REPLACEMENT PARTS

Part Description	Part #
1. 10" SlimLine™ Housing	153017
2. O-ring	143026
3. CBU-10	155271-03
4. Teflon® Sleeve	163518
5. Quartz Sleeve	163504
6. O-rings for Quartz Sleeve	163538
7. 1/2" Blk Cap w/o pr	SPECIAL ORDER
8. Spacer Bushing	163517
9. Mounting bracket	SPECIAL ORDER
10. UV lamp	163503
11. Control Module (120v/60Hz)	163501 for use with UVS-110-1
Control Module (220v/50Hz)	163502 for use with UVS-110-2
12. SW-1 Wrench (not shown)	150539



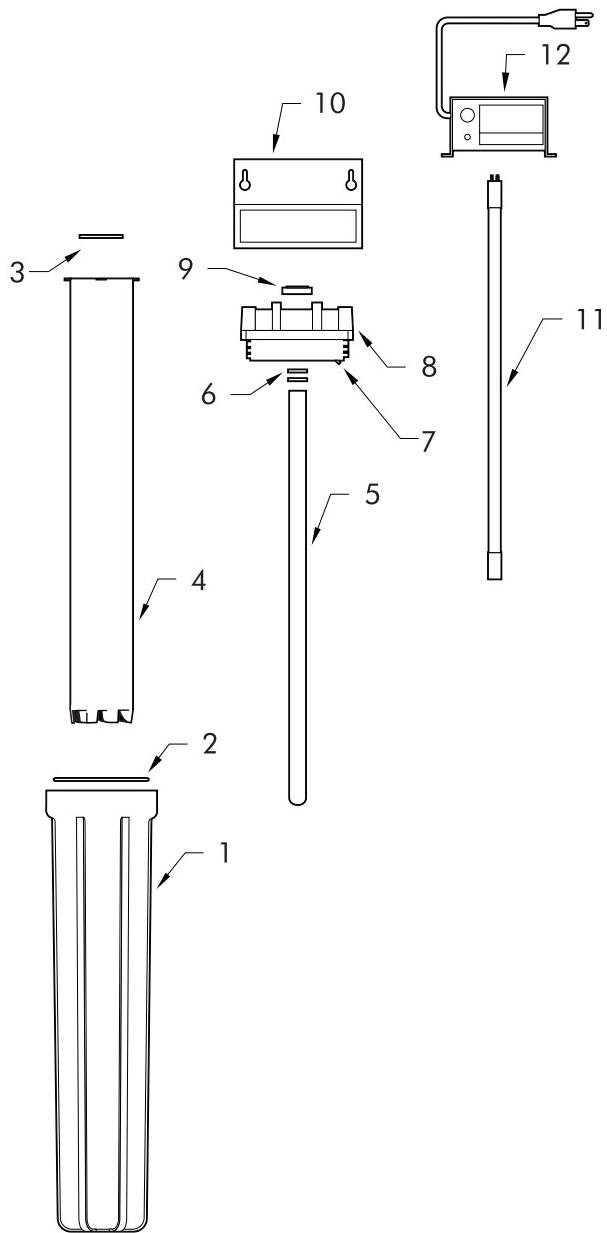
UV-110 REPLACEMENT PARTS

Part Description	Part #
1. 10" Housing	153001
2. O-ring	143011
3. CBU-10	155271-03
4. Teflon® Sleeve	163518
5. Quartz Sleeve	163509
6. O-rings for Quartz sleeve	163516
7. Plunger Rod w/retainer	163519
8. 3/4" blk cap w/o pr	SPECIAL ORDER
9. Spacer Bushing	163517
10. Mounting bracket	SPECIAL ORDER
11. UV Lamp	163508
12. Control Module (120v/60Hz)	163506 for use with UV-110-1
Control Module (220v/50Hz)	163507 for use with UV-110-2
13. SW-2 Wrench (not shown)	150295



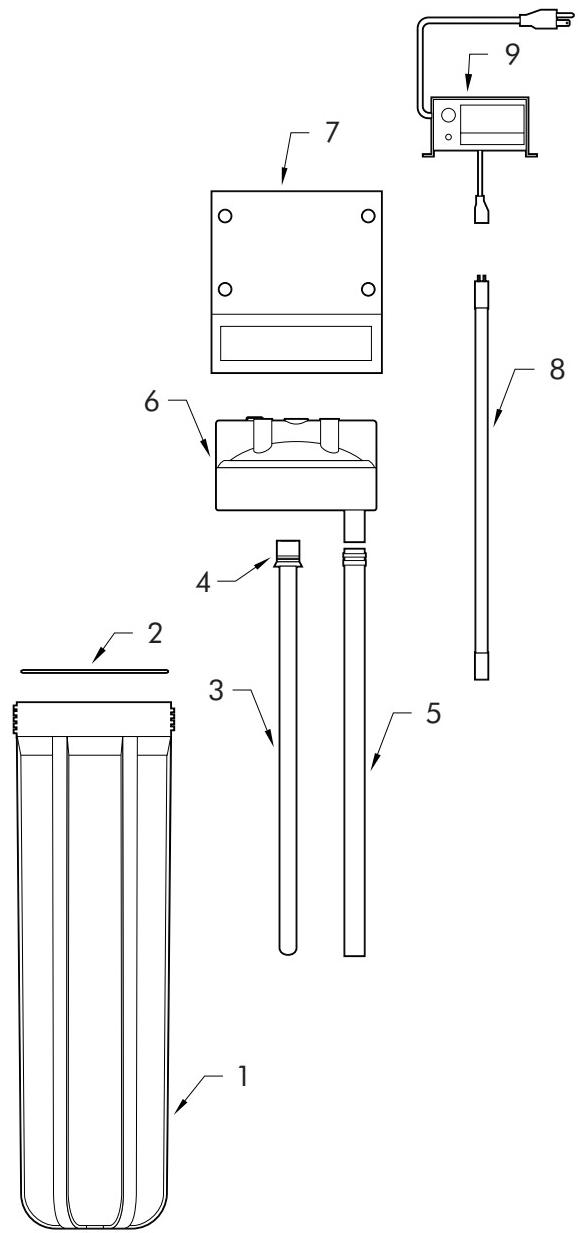
UV-120 REPLACEMENT PARTS

Part Description:	Part #
1. 20" Housing	153013
2. O-ring	143011
3. Gasket for Insert Sleeve	163515
4. Stainless Steel Insert Sleeve	163514
5. Quartz Sleeve	163513
6. O-rings for Quartz sleeve	163516
7. Plunger Rod w/retainer	163519
8. 3/4" blk cap w/o pr	SPECIAL ORDER
9. Spacer Bushing	163517
10. Mounting bracket	SPECIAL ORDER
11. UV Lamp	163512
12. Control Module (120v/60Hz)	163510 for use with UV-120-1
Control Module (220v/50Hz)	163511 for use with UV-120-2
13. SW-2 Wrench (not shown)	150295



UVBB-120 REPLACEMENT PARTS

Part Description:	Part #
1. 20" BB Housing w/SS sleeve	SPECIAL ORDER
2. O-ring	143273
3. Quartz Sleeve	163548
4. Plastic Holder w/O-rings	163543
5. Teflon® tube	163545
6. 1-1/2" blk cap w/o pr	163541
7. Mounting bracket	SPECIAL ORDER
8. UV Lamp	163512
9. Control Module (120v/60Hz)	163542 for use with UVBB-120-1
Control Module (220v/50Hz)	163547 for use with UVBB-120-2
10. SW-3 Wrench (not shown)	150296



MAINTENANCE

The quartz sleeve should be cleaned with warm soap and water every three months.

UV bulb should be replaced every 9-12 months. The bulb does not normally burn out, however the efficiency of the bulb decreases after one year.

Contact your local water treatment professional for replacement cartridge and bulb pricing or call 1-800-645-0267 for a dealer near you.

Leaks...

At inlet/outlet connections:

- Use Teflon® tape.

Between cap and housing:

- Make sure that the O-ring is clean, lubricated and properly seated.
- Hand-tighten the housing.
- Check cartridge length. If cartridge is too long, replace with proper length cartridge.

At UV quartz sleeve

- Turn off all electrical power to the unit by unplugging or throwing the circuit.
- Remove UV lamp and unscrew housing (See UV lamp replacement).
- Check quartz sleeve for cracks, leaks and loose fittings.
- Check that O-rings between quartz sleeve and cap are secure and have not been cut or damaged.
- If the sleeve is broken replace with a new quartz sleeve and new O-rings.

TECHNICAL SUPPORT

Call our technical support staff to have any question answered: 1-800-861-8758. Outside of the United States, call (920) 457-9435.

WARRANTY

Pentek warrants to the original owner (under normal use): Ultra Violet Systems to be free from defects in material and/or workmanship one (1) year from the date of purchase. Any replacement products furnished will be free from defects in material and/or workmanship for the remainder of the original warranty period, or 30 days, whichever is longer. This warranty does not cover: (1) cartridges, UV bulbs, and accessories (2) defects not reported within the above time period, (3) items manufactured by other companies, (4) problems arising from failure to comply with Pentek instructions, (5) problems and/or damage arising from acts of nature, abuse, misuse, negligence or accident by any party other than Pentek, (6) problems and/or damage resulting in whole or in part from alteration, modification, repair or attempted alteration, modification or repair by any party other than Pentek, (7) noncompliance with applicable codes/ordinances.

If a defect in workmanship and/or material in a product or part covered by the warranty should arise, Pentek, at its sole discretion, will repair or replace the defective product or part (Pentek may consider, in good faith, the customer's preference).

All claimed defective product must: (1) be authorized for return by Pentek with an RGA number (2) include proof of the purchase date of the product or part (3) returned to Pentek prior to the expiration of the warranty date, at the customer's expense, shipment pre-paid, (4) be accompanied by a letter detailing the Model Number, Serial Number (if any), and a brief description of the problem.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, PENTEK DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCTS, PARTS AND ANY ACCOMPANYING WRITTEN MATERIALS.

To the maximum extent permitted by applicable law, Pentek shall not be liable for any damages whatsoever (including, but not limited to, loss of time, inconvenience, expenses, labor or material charges incurred in connection with the removal or replacement of the Ultra Violet Systems, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the defective products or parts, even if Pentek has been advised of the possibility of such damages.

Pentek's maximum liability under any provision of this Limited Warranty shall be limited to the amount actually paid for the Ultra Violet System.

NOTE: Because some states do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply.

THIS WARRANTY GRANTS SPECIFIC LEGAL RIGHTS, AND OTHER RIGHTS MAY APPLY. SUCH RIGHTS VARY FROM STATE TO STATE.



502 INDIANA AVE, SHEBOYGAN WI 53081 USA

Toll Free Technical Support: 800-861-8758 • Technical Support: 920-451-9301

E-mail: supportspecialist@pentekfiltration.com

Phone: 920-457-9435 • International Fax: 920-457-2417

E-mail: international@pentekfiltration.com • www.pentekfiltration.com